

The Eastern Iowa DXer



The Official Newsletter of the
Eastern Iowa DX Association

An affiliated club of the American Radio Relay League



January 2000

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Club Officers

President
Vice President
Secretary/Treasurer
Repeater Committee
Membership Committee

Dave Andersen, KØRX
Nelson Moyer, KUØA
Tom White, KØVZR
Al Groff, KØVM
Joe Finkstein, WØMJN
Jim Spencer, WØSR

PacketCluster

147.51, 144.91, 223.40, CRNETROM

WB8ZRL

Repeater

144.59/145.19

WØNX/R

From the President

Dave Andersen, KØRX

Wow - the millennium boundary came and went, and nothing blew up or crashed, or any of those nasty things. Hope that you all had a good New Year's holiday, however you celebrated it. I see from the CR Gazette that NØLNO and KCØOX were working hard at that time. Congratulations on the nice publicity for amateur radio, guys!

I want to express my thanks to the club membership for a super response on my proposal for a big showing in the CQWW this past fall. I was going to publish the scores in this issue of the newsletter, but had a hard-disk crash that prevents my doing so - however the bottom line is that we had a huge showing. I think the club score will be somewhere in the 15-20 million points range. That's outstanding. Special kudos go to NØAV, NRØX, and NØDY for their outstanding single-operator efforts. Lots of fantastic scores for many, many stations. I should be able to recover the data from my hard drive so that we can have some nice certificates at the January 21 meeting. I would like to propose that we make a similar effort in the ARRL DX contest coming up this February and March. Get on and operate, guys! It's what makes amateur radio fun.

Congratulations to Wade, WØEJ, on his recent election as ARRL Midwest Division Director. Wade overwhelmed his competition, and I think, will make an outstanding Director.

If you haven't heard yet, the FCC has published the new license classes that will take affect next April. There will be 3 levels of licensing, and one code speed - 5 wpm. That will make quite a change for our hobby. I haven't decided how I feel about this yet. Some days I think that it's just more in a continual process of degrading standards, and other days I think that this will influence a lot of new blood to get into the hobby, and in particular, DXing and contesting. Obviously, to be competitive at these two endeavors, a working knowledge of CW is a great help. That may continue to motivate some. The bottom line is though, that if there is nobody around to work, our hobby would become very boring!

A minor item on a club membership requirement: all EIDX members must also be members of the ARRL. Following the changes in licensing requirements, I think it is of the utmost importance that we have as great a representation of DXers and testers in the ARRL as possible. Please be sure to renew your ARRL membership as it expires!

Our January meeting will be on Friday, January 21, 2000 in 219C Linn Hall, on the Kirkwood campus. The doors will open for eyeball QSOs at 6:30 p.m., and the regular meeting will begin at 7:30 p.m. The program for this month will be a demonstration of several of the popular logging programs, including time for a hands-on session if you like. Hope to see you there!

73 Dave KØRX

Minutes — EIDXA Fall Meeting

The meeting was called to order by KØRX. A moment of silence was taken to recall WØUZ, WØIZ, and WØMLY.

Introductions were made all around and those attending signed in. The club roster with e-mail addresses was passed for possible editing.

Reports

Club Call Sign: We are still WØNX. The FCC has a log jam and is effectively not dealing with vanity calls. This can wait until the problems are solved. There is a sufficient time buffer.

Club Shirts: WØAWL reported no recent shirt activity. However, Terry checked on club badges at Dayton and then with Sign Man III who does not come to Dayton any more. Contact WØAWL for details. Sign Man III can still do our badges with logo.

Cluster: A new digipeter site is being worked on. Williamsburg is not well located to reach NØNI since he moved to Ripley.

Repeater: KØVM reported its working okay. Some reported a "white noise" interference.

Membership: NØDY, Jeff Davis, was approved as a full member. Welcome, Jeff.

Contests: KØRX spoke about contesting. He encouraged all to participate to his/her comfort level at least. Send in your scores and also send them to KØRX. He hopes the club can make 5,000,000 points. Further planning for a traveling trophy is hoped for.

Words To Live By: Don't let your professional life interfere with DX. Your professional life will end, but Dx'ing is forever.

Nomination for 2000 Officers: The old (getting older) ticket was re-installed as predicted in the last newsletter. NØYVY led the railroad. President KØRX, Vice President & Newsletter Editor KUØA, Secretary-Treasurer KØVZR.

QSL's: KØJGH reported that it has been two years since we've ordered. The prices are now: 2000 \$80, 3000 \$90 (including postage). There is no limit or magic order number. Just provide an old card with any corrections. Contact Glen, KØJGH.

Newsletter Editor: When submitting articles to the newsletter, please use indents and tabs instead of the space bar for formatting text and tables. All extra

spaces have to be manually removed and the entire text must be reformatted manually when the space bar is used for formatting articles or tables. Check with Nelson, KUØA, if you have any questions about how to set up indents and tabs. Articles are easier to handle if they are written in a word processor and spell checked before attaching them to email. Text files may be sent via packet radio, but keep the formatting simple. Either PC or Mac files are acceptable.

New Members: In the club by-laws, a brief biography is called for when a new member joins.

WØEJ: Thanks to the EIDXA and a committee for helping with the Midwest Director campaign. The committee was WB8ZRL, NØYVY, KØAL, NØLNO, WØSR, NCØO. Results of the election are due about November 19, 1999.

New Business:

DXCC 2000 — think about it.

WØPPF & WØSR sent a wish for more heads-up time for meeting. Conflicts prevented their attendance.

Winter Meeting: After a short discussion, January 21, 2000, was tentatively chosen.

KØJGH spoke in praise of his C6A vacation for both vacation and Dx'ing.

Adjourn: Moved, Seconded, and we did.

Respectfully Submitted,
Tom White, KØVZR

TREASURER'S REPORT

Income:

23 Dues @ \$5	\$115.00
10 Caps, EIDXA	\$50.00
2 Caps, Inventory	\$10.00
Subtotal	\$175.00

Note: More dues are still to come

Expenses:

Newsletter	\$51.62
WØAWL/Caps	\$45.36
Total Withdrawals	\$96.98
Net Change	\$78.02

Checking Balance	\$442.36
Savings Balance	\$364.34

WØIZ Estate Sale

I am offering for sale the following items from WØIZ's shack:

Icom IC-765
 Heathkit SB-2200 amp 80-10
 Astron RS-35A
 Astron RS-12A (not working)
 HyGain 2.5A power supply
 Alinco DJ-F1 2M handheld
 Yeasu FT-2500 2M mobile
 Kenwood TR-9000 (not working)
 Kenwood TS-711A 2M all-mode
 Yeasau FT-102/FV-102 HF xcvr
 Midland 220 xcvr
 KDK FM-2033 2M xcvr
 Drake 1K lowpass filter
 Drake 100W lowpass filter
 Nye Viking 1K lowpass filter
 Alliance HD-73 rotator
 Mirage B-1016 amp
 KCØQ keyer
 Autek MK-1 cmos keyer
 Brown Bros paddles
 Speedx straight key
 AES ICP-1 RTTY TU
 Heathkit HO-10 monitor scope
 Janel Labs QSA-5 preamp
 Heil mike
 Heathkit HM-2140 1.8 - 30 SWR meter
 Welz 1.8 - 150 200W SWR meter
 Swan SWR-1 power meter
 HP model 410B VTVM
 Techtronics 310A O'scope
 B&W model 575 coax switch 6 position
 B&W model 375 coax switch 6 position
 coax switch 2 position
 Autek QF-1 active filter
 Weston Model 571 AC voltmeter
 Seimens & Halske meter

If interested, please contact me.

Tom, WB8ZRL

Heil ProSet Improvement

Craig Fastenow, KØCF

I recently acquired a Heil ProSet 5 and am really happy with it save for two things - my breath "pops" the VOX and the mic over-accentuates sibilants. My previous mike was a Plantronics MS40 (the kind that airline pilots and NASA controllers use) that clips onto your eyeglasses and has only a small voice tube that descends to the corner of the mouth. This microphone is immune to breath pops and sibilants because of the pickup position. However, there is an easy fix for the Heil.

Make a quick trip to Radio Shack and buy their part number 33-378 microphone wind screen, which costs about \$4. This windscreen is much too long for the Heil's mic, but is easily trimmed with ordinary sewing scissors. I cut mine to 2" in length. But, after trimming, the windscreen will effortlessly slip off the microphone. This is easily fixed. Just raid the XYL's sewing box for some black thread and snip off a couple of feet. Snugly wrap several turns of this thread around the windscreen about 1/8" to 1/4" from the open end (with the screen fully pushed down over the mic head), securely knot it and trim the excess close to the knot. Presto! You have a nice ball-shaped, very neat windscreen that completely eliminates popping the VOX with your breath and removes sibilants.

Y2K in Johnson County



Photo from the Iowa City Press Citizen

Rich, WWØQ called the Johnson County Emergency Net into session at 11:00 a.m. New Year's Eve. The net was placed on standby until 11:00 p.m., at which time it was activated in anticipation of any Y2K emergencies. As it turned out, Y2K was a non-event.

DX Is! — 80 Meters

Nelson Moyer, KUØA

Sooner or later, most DX'ers take on the challenge of 5DXCC. Inevitably, 80 meters is the last band to receive serious attention in that quest. That's not too surprising, when you consider that most DX'ers are land challenged, and many are operating with verticals. The combination of high noise levels and weak signals is discouraging at best, and intimidating at worst. It's possible to work well over 100 entities on 80 meters with a vertical antenna and amplifier, if you take the time to learn the secrets of the band. I've worked 162 entities on 80 meters using an HF2V on a single 8 foot ground rod without radials and 500 watts. So here you have it, the little pistol's guide to 80 meter DX'ing.

80 meters is a night-time DX band—everybody knows that. But success on 80 meters, particularly from the middle of the U.S., requires a little more sophistication than just turning on the radio and exchanging 599 reports with JTICO. Long-skip propagation on 80 meters is heavily influenced by solar terrestrial conditions. Generally, a quiet sun for several days in the winter is a harbinger of good DX'ing on 80 meters. When the K index is below 7 and the A index is 2 or less (quiet conditions), you may want to sacrifice some sleep to check the bands. But unlike the higher bands, you can't just sit there in the middle of the night and wait for spots on the cluster to tell you where to find the DX. You have to do it the old fashioned way—tune and listen.

The dogma of 80 meter DX'ing is that signals peak at sunrise at the eastern end of the path. That means you work the Indian Ocean between 8-9 p.m. local time, Eastern Europe, the Middle East, and Eastern Africa between 9 p.m. and midnight, and Central and Western Europe between midnight and 1 a.m. Of course, that's only when the DX is there, the band is open, and the noise levels permit you to hear the DX. Formidable obstacles. Obviously, it's best if you don't have to go to work the next morning.

For the Pacific, ZL/VK, JA and Southeast Asia, you'll want to get up early in the morning, say around 2-4 a.m. for the Central Pacific, and 4-6 a.m. for the rest of Eastern Asia. Of course 80 meter DX'ing is best in winter months while most of the thunderstorms are in the Southern Hemisphere. The 80 meter DX'ing season

starts in October, but the best months are usually December and January. Grayline propagation is best during the equinox, but that won't be much help if you're using vertical antennas, and you can't null out the state-side QRM.

DX'peditons frequently operate on 80 meters, and they are usually loud and available at predictable times, which is a great advantage if you're losing sleep before a work day. I've used the cluster spots to predict when a needed station will be QRV and snagged many plums by checking the bands after waking up to visit the bathroom. You can schedule such visits to coincide with the operating habits of the DX by drinking a calibrated amount of water before retiring. Using this method, I've gotten up, flipped on the amp, visited the bathroom, found the DX, worked them, logged them, and been back in bed in 5 minutes. No pile-ups, no waiting, just rare DX to check off the needs list. If you're into working DX on all 9 bands, you'll really appreciate this strategy. I've used it to work 3D2, 5W, C2, FOØ/A, H4Ø, KH7, KH9, T2, T3Ø, T3I, ZK3, ZL7 and ZL9 on eight bands during a single operation (I don't have 160 capability, since my FT707 doesn't cover that band). You'll have to resort to something like that to work the Pacific on 30, 40 and 80 meters.

There are some secrets which will help you battle the noise. Receive-only antennas are a necessity for those of us wishing to extent the 80 meter count above 100, while using verticals for transmit. While verticals radiate at a low take-off angle, which is critical for long-haul DX'ing on 80 meters, they are especially prone to vertically polarized noise from electric motors, power lines, etc. A dipole is a marked improvement, but if you're on a 60 x 120 city lot, you will have to resort to half-slopers, or loops to hear the weak ones. I've used a K9AY terminated loop for the first time this year, and so far, I've worked my first zone 24 on 80 meters while listening on the loop. It knocks down the noise from solid S9+ on the vertical to S3 on the terminated loop. I've heard zones 22 and 26 on the terminated loop, but I haven't been able to work them yet (radials would probably have helped my transmit efficiency). By far the quietest antenna I've tried for 80 meters is the 5 foot square magnetic loop shown in the ARRL Antenna Handbook. It knocks the noise down from solid S9 on the vertical, to less than S1. Unfortunately, the signals are very weak, and you'll need 20-40 dB of preamplification

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to hear the DX. Given its immunity to noise, low cost, and the small size, the magnetic loop is a real winner for a city lot. Just be sure to use a high quality preamp with it for maximal effect.

To optimize your ability to hear the DX, you may wish to consider installing several receive antennas and connecting them to a coax switch. Besides the K9AY loop and the magnetic loop, I have a low dipole along the fence line in my back yard. Since my lot is only 60 feet wide, I bent the ends of the dipole legs to follow the fence along the side of the lot on each side. The fence is only 5 feet high, but I hear stateside, Canadian, Central American, and Caribbean stations better on the low dipole than on the vertical because the atmospheric noise is lower on the dipole. Also, don't forget to try your tower/beam as an 80 meter receive antenna. While my tower doesn't hear very well on 80 meters, it's a great receive antenna for 30 meters. On 30 meters, it's much quieter than my HF2V transmit antenna. Other receive antennas you might want to try are a slinky dipole or slinky beverage, a snake antenna, or a horizontal loop around the eaves of your house. Signal levels from these antennas will be weak, so plan to use a preamp between the coax switch and the receiver. Of course, you'll need another coax switch to switch between your receive antennas and your transmitting antennas. Just be sure you don't transmit on the receive antennas in the heat of battle! They probably won't radiate nearly as well as your transmit antenna, and you might even damage any directional switching circuits like the ones used with the K9AY terminated loop. Worst of all, you may miss the DX opening for that elusive zone in Central Asia because you were calling on the wrong antenna.

One of the easiest tricks to improve your signal to noise ratio on 80 meters is to start with the RF gain at about 2 o'clock, and turn up the AF gain to 10 o'clock. Then adjust the RF and AF gain for maximal signal and minimum noise. Obviously, cascaded filters in your receiver will make it easier to optimize those weak signals, while minimizing the QRN and QRM. I can't address those features, since my radio doesn't have them. I did build a Super SCAF audio filter several years ago, but it's no match for the state of the art receivers available today. Loud signals nearby simply paralyze my receiver and I can't hear anything. That's a source of frustration when the DX is listening up 2 and the state-side

stations are 20 over S9.

The last and most obvious tip for working 80 meter DX is to concentrate on CW. You can develop the ability to copy CW 10 dB below the noise level. Use offset tuning to adjust the sidetone pitch to favor your ears. I hear a lower tone better than the highs, so I tune for optimal copyability. Another tip is to keep the audio down as much as possible. It's common to crank up the volume to the headphones, with the result that your ears become desensitized from the static crashes to the point that you can't hear the DX. Listen at the lowest volume with the optimal signal to noise ratio if you plan to be at it very long, or you will suffer permanent hearing loss.

You'll have to work some stations on phone, since that's the only place they show up, but you'll make your first 100 a lot quicker on CW than you will on phone. A low-pitched voice with a thick foreign accent is particularly tough to understand on phone. Tune your offset to emphasize the highs. Occasionally, you'll run into a very strong DX or stateside station working with several weaker stations in a mini-net type operation. Since I have no objections to nets as a means of working new ones, I'll take advantage of the relative absence of QRM to work the weaker stations at the invitation of the big gun on frequency. Sometimes, the big guns on the East Coast will tell the DX that there's a zero in there calling them, and the DX will stand by for zeros. It doesn't happen much, but every little bit helps those totals.

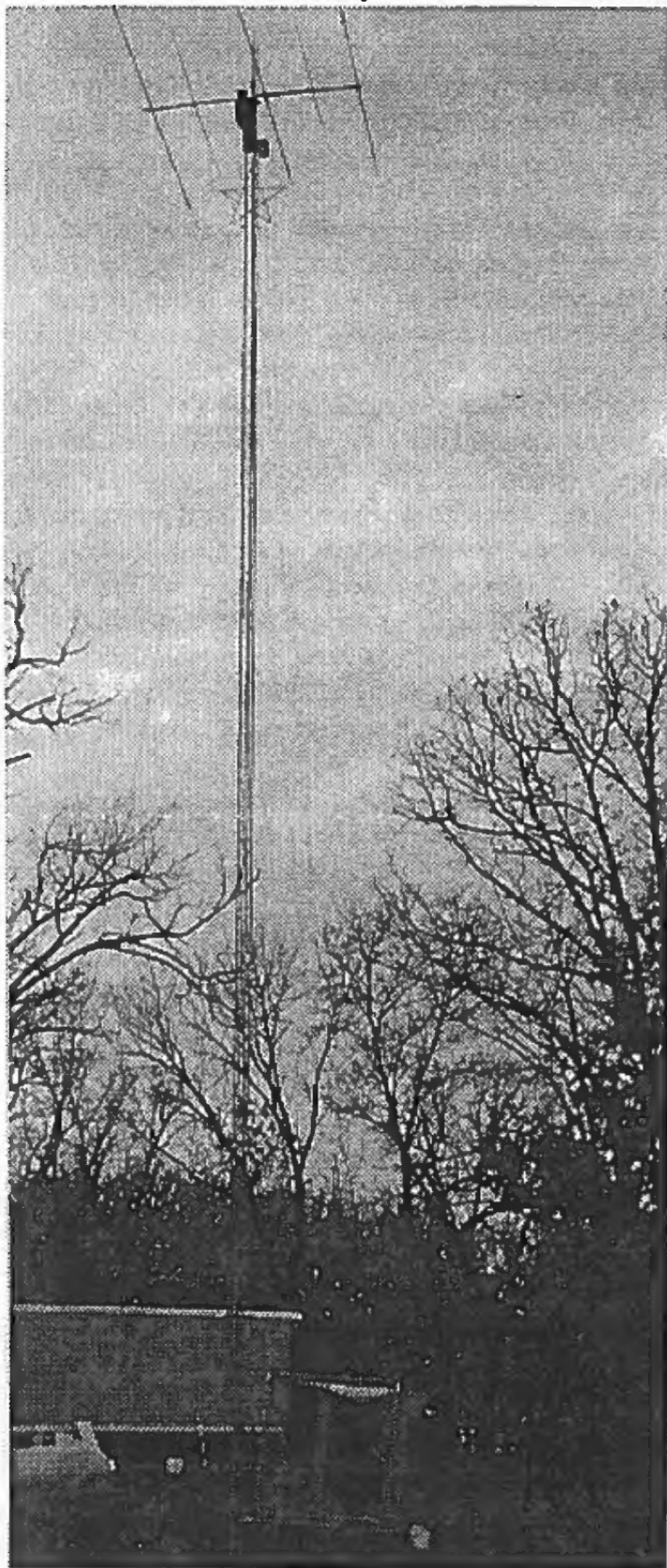
Calling CQ on 80 meters is probably not a good idea if you're a little pistol. Chances are the DX will hear you a lot better than you can hear them, and you run the risk of being labeled an alligator—all mouth and no ears. I know you've seen the cluster spots with the comment, "no ears". This means that the DX gets out great, but he can't hear anyone coming back to him because of high local noise and poor receive antennas.

Contests would seem to be a smorgasbord for needy DX'ers on 80 meters, but my experience is that the stateside big guns will overwhelm the band and you won't be able to hear the weaker DX. I've had the most success on 80 meters by being in the right place at the right time, and getting there first. If you wait until they're spotted on the cluster, your chances of working them from a little pistol station are slim and none.

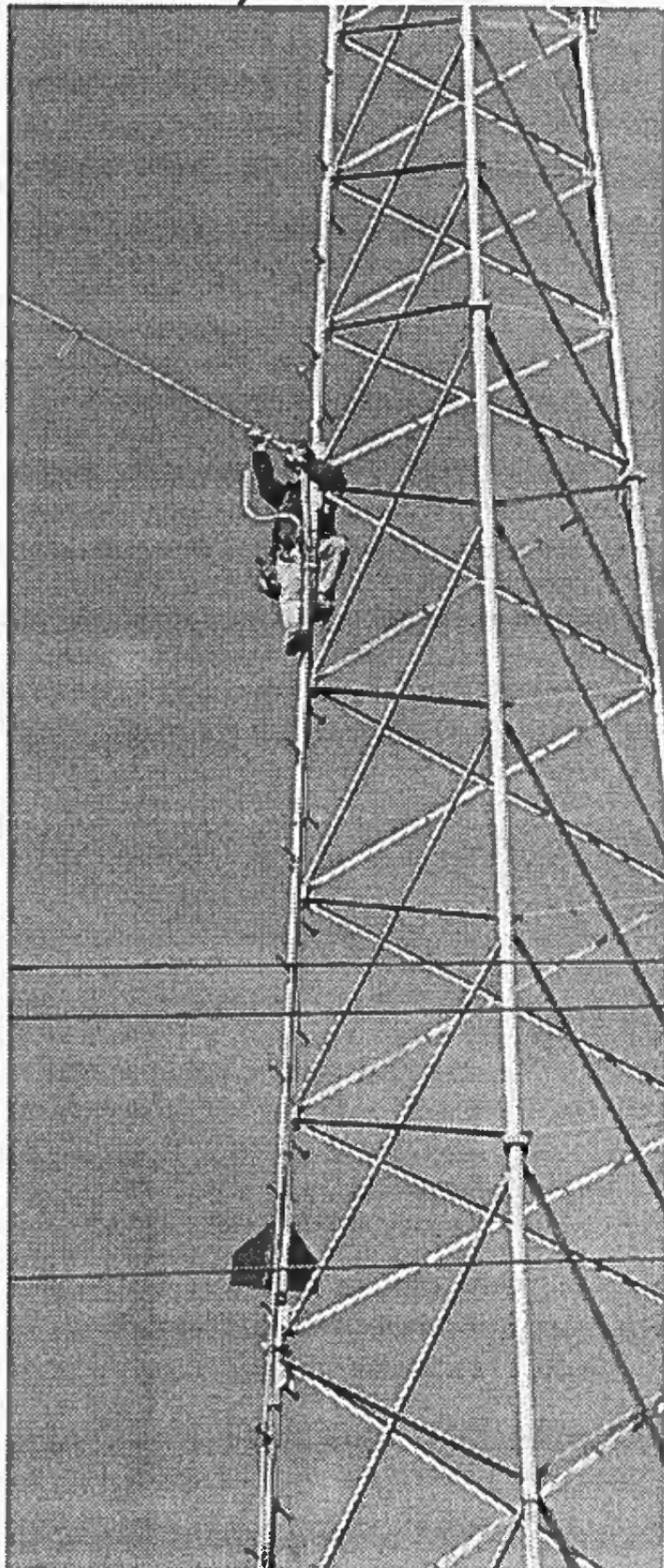
For those elusive but otherwise workable stations,

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A Tail of Two Towers — Photos by WØAWL

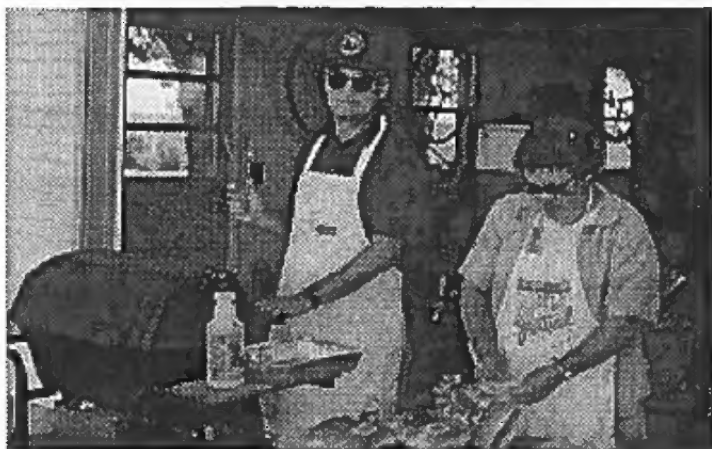


Mother Nature smiled over the Thanksgiving weekend, and Tony's tower suddenly sprouted 40 feet for a total height of 110 feet, thanks to an assist from Dallas, WØDNW, and Terry, WØAWL. Tony should be a presence on the bands with his TH5.



Y2K jitters prompted installation of a Ringo Ranger at 80 feet on the Washington County Public Safety tower, thanks to the help of Tom, KEØMO, who did the climbing, and Terry, WØAWL, who loaned his spare 2 meter rig.

1999 EIDXA Picnic — Pictures by KUØA



Terry, WØAWL, and XYL Shanna, did the honors at the grill. They've got brats down to a science, since this was the third year they have served as head chefs.



Terry, WØAWL, takes his work seriously as Jim, KZØC, looks over to see when the brats will be done. Frank, WØGWK, takes his ease seated at the right.



Terry, WØAWL, takes a break from the grill to visit with picnic host Hinz, NRØX, who enjoys a cold one after conducting tours of his antenna farm. There's been some debate whether it's Terry's brats or Hinz's antenna farm that is the main draw for the picnic.



Jim, WØSR, appears to have a halo from all those hallowed years he spent on the DXAC, or is that just NRØX's satellite dish. Also pictured on the left is Dave, KØRX, who is the EIDXA President for the year 2000. Behind Jim, we see Craig, KØCF, and Doug, WØSML, in thoughtful conversation.



Tom, WBØZRL and packet cluster sysop, enjoys a cold one and some lively discussion with Dave, KØRX, as Jan, NØAAA, and Jim, KZØC, look on in amazement.

Editor's Note:

Central Iowa's premiere antenna farm, under construction at NRØX's QTH on Highway I just north of Martelle, Iowa sports a collection of towers and antennas which would make any DX'er or contester drool. You won't have any trouble finding the place, since the towers are visible for miles. When the crops on the adjacent fields are cleared in the fall, Hinz, installs a set of Beverage antennas which make him a significant presence on the low bands. NRØX was one of the very few Midwestern stations to work VKØIR on 160 meters.

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you may wish to try a schedule. If the DX operates CW, and if propagation permits, you can log some rare DX without fighting the war. Just be sensitive to the time differences between you and the DX, so you don't expect him to be inconvenienced on your behalf. He's more likely to accommodate the schedule request if you're the one who has to get up in the middle of the night, go to work late, or come home from work early.

Patience is a virtue on 80 meters. Listening is better than calling. Finesse is better than brute force, although an amplifier is practically a necessity. Above all, knowledge is power. The more you learn about propagation, the higher your 80 meter totals will be, regardless of your station equipment. You have to know when they are there and when the band is open, in order to work them.

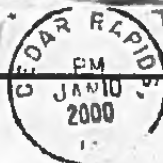
While this isn't the definitive treatise on 80 meter DX'ing, I hope it will inspire those of you who don't already have DXCC on the band to get to work. And for those of you with 5BDXCC, maybe you will want to go for 200 or more. The ARRL Millennium Challenge virtually requires you to work all bands if you aspire to the pinnacle of DX'ing, so get with it!

MEETING NOTICE

The next meeting of the Eastern Iowa DX Association will be Friday, January 21, 2000 at 7:30 p.m. in room 219C Linn Hall on the Kirkwood Community College campus. Doors open at 6:30 p.m. for eyeball QSOs. Monitor 145.19 for directions if needed. See you there.



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